

Linking Students with Agriculture
List of New Jersey Department of Education Core Curriculum Content Standards
Which are Reinforced by an Agricultural Education Session at Four Sisters Winery,
Belvidere, New Jersey
Grade Groups 5-8

Please note-- the first number is the instructional area, the second number is the New Jersey Department of Education Core Curriculum Standard and the third number after the colon (:) is the Cumulative Progress Indicator that is also written out. The activity during the Agricultural Educational Session is written in italic. Please note sessions do not include wine tasting.

1. Visual and Performing Arts
(Grades 5-8)

- 1.5:2 Investigate, experience and participate in dance, music, theater and visual arts activities representing various historical periods and world cultures. *Students will view and touch specialized wine making equipment developed over the centuries.*

2. Health and Physical Education
(Grades 5-8)

- 2.2:4 Identify laws related to the sale and use of alcohol, tobacco and other drugs. *Students will not be served wine at the winery but will be encouraged to follow age appropriate responsible consumption with food.*
- 2:2:11 Discuss laws pertaining to the use, sale, and possession of alcohol, tobacco, and other drugs. *Students will not be served wine or encouraged to purchase wine.*

3. Language Arts Literacy
(Grades 5-8)

- 3.1:7 Talk with others to identify, explore, and solve problems. *Students will receive information on pruning grape vines, thinning grape clusters, picking grapes, juice analysis, fermentation, finishing and bottling.*
- 3:1.17 Conduct an informational interview. *The wine maker will answer questions regarding wine production, quality and taste.*
- 3.2:3 Listen for a variety of purposes, such as enjoyment and obtaining information. *Students will learn of the value of wine and its enhancement of food.*
- 3.2:6 Develop listening strategies such as asking relevant questions, taking notes, and making predictions, to understand what is heard. *During the session, students will find answers to questions about vitaculture.*
- 3.2:6 Recognize persuasive techniques and credibility in oral communication. *Students will learn of the various factors that influence wine taste and quality.*
- 3.3:3 Use writing to extend the experience. *Students are encouraged to write follow up letters and E-mails to the owners and operators of the winery.*
- 3:4:15 Expand vocabulary using appropriate strategies and techniques, such as work analysis and contest clues. *Students will be given new terminology for wine production and wine quality.*

4. Mathematics

(Grades 5-8)

- 4.1:2 Recognize, formulate, and solve problems arising from mathematical situations and everyday experiences. *Students will use devices that measure sugar and sulfur content. In addition, the equipment was made in Europe and students will be exposed to using the metric system of measures.*
- 4.1:5 Construct, explain, justify, and apply a variety of problem-solving strategies in both cooperative and independent learning environments.**
- 4.3:6 Recognize the connections between mathematics and other disciplines, and apply mathematical thinking and problem solving in those areas. *Mathematical problems using winemaking examples are included*
- 4.3:7 Recognize the role of mathematics in their daily lives and in society. *Wine production has examples where mathematics is important to this agricultural business.*
- 4.3:10 Apply mathematics in their daily lives and in career-based contexts. *Wine production has examples where mathematics is important to this agricultural business.*
- 4.5:4 Use a variety of tools to measure mathematical and physical object in the world around them. *Students will see and use different measures that are used in the production of wine.*
- 4.8:11 Develop, apply, and explain method for solving problems involving proportions and percents. *Sampling of wine lots by the wine maker requires determination of the amount of sugar to add based upon proportion.*
- 4.9:3 Recognize the need for uniform unit of measure. *Students will see different size measures used in the winery including the metric system.*
- 4.9:6 Understand and incorporate estimation and repeated measures in measurement activities.**
- 4.9:14 Understand and apply measurements in their own lives and in other subject areas. *Students will see how important exact measures are in wine production.*

5. Science

(Grades 5-8)

- 5.1:2 Recognize that since the components of a system usually influence one another, a system may not work if a component is missing. *During the session, students will see grape production and the process of growing will be explained and shown to them.*
- 5.1:4 Describe components of a system and how they influence one another. *Students will see that the process of fermentation requires precise conditions and the alteration of conditions increases, slows or stops the process.*
- 5.2:1 State a problem about the natural world in the form of a question. *Experience with growing grapes and wine production will stimulate the development of problems that can then be researched.*
- 5.3:2 Recognize that scientific ideas and knowledge have come from men and women of all cultures. *Students will see that grape vines and their wines originated in different countries.*
- 5.4:2 Demonstrate how tools are used to do things better and more easily or to do tasks that could not otherwise be done. *Students will see how equipment saves hand labor.*
- 5.4:4 Find and report on examples of how technology helps people. *Students will see how winery equipment saves labor and is more sanitary.*

- 5.5:1 Judge whether estimates, measurements, and computations of quantities are reasonable. *Students will estimate the amounts in a variety of containers.*
- 5.5:2 Use a variety of measuring instruments, emphasizing appropriate units. *Students will see a variety of ways that wine is sold.*
- 5.6:1 Compare and contrast living and nonliving things. *Students will have the opportunity to see and experience the process of wine production.*
- 5.6:2 Determine the basic needs of organisms. *Students will have the opportunity to see and experience yeast production of wine.*
- 5.6:4 Show that plants and animals are composed of different parts serving different purposes and working together for the well being of the organisms. *Students will have the opportunity to see and experience a biological process.*
- 5.8:5 Show how substances can react with each other to form new substances having characteristic properties different from those of the original substances. *Students will see how sugars are transformed into alcohol and CO₂.*
- 5.12:1 Investigate the interdependence of living things and their environment. *Students will see how the environment is controlled to benefit yeast or terminate alcohol and CO₂ production.*
- 5.12:2 Explain how meeting human requirements affects the environment. *Students will experience how agriculture uses the environment to raise grapes and produce wine.*

6. Social Studies (Grades 5-8)

- 6.1:4 Give examples of the impact of government policy on their lives. *Students will see the importance of the winery's location to homes, roads and other businesses.*
- 6.4:7 Understand how family, community, and social institutions function to meet individual and group needs. *Wine production and wine consumption have been a part of family life and religious observance and many cultures.*
- 6.5:12 Analyze how customs are transmitted in cultures. *Students will learn of the importance of wine in the Central and Southern European regions.*
- 6.8:2 Discuss the similarities, differences, and interdependencies among rural, suburban, and urban communities. *Students in traveling to the winery will see a variety of communities.*
- 6.9:1 Explain the characteristics of renewable and nonrenewable resources and their distribution, and the role of resources in daily life. *Students will see how growing a crop such as grapes and wine production is a renewable resource.*
- 6.9:2 Explain how people depend on the physical environment and how they modify the environment. *Students will see how the environment has been modified to maximize the development of the grapes and wine.*

7. World Languages (Grades 5-8)

- 7.2:1 Demonstrate an awareness of culture. *Students will see how wine is important to different cultures and the celebration of holidays and special occasions.*

**8. Cross Content Workplace Readiness
(Grades 5-8)**

- 8.1:5 Identify skills that are transferable from one occupation to another. *Students will see the many tasks performed at the winery.*
- 8.2:1 Understand how technological systems function. *Students will see how technology is used in winery equipment.*
- 8.2:2 Select appropriate tools and technology for specific activities. *Students will see how equipment is designed and used to perform specialized functions.*
- 8.5:3 Demonstrate principles of safe physical movement. *Students will be required to practice safety and follow safety rules while visiting this agricultural enterprise.*
- 8.5:7 Identify and follow safety procedures for laboratory and other hands-on experiences. *Students will be required to practice safety and follow safety rules while visiting this agricultural enterprise.*

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